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VITAL STATISTICS FOR AUGUST.

Summary.—For August there were reported 2,176 living births; 2,501 deaths, exclusive of stillbirths; and 1,760 marriages. For an estimated State population of 2,001,193, these figures give the following annual rates: Births, 12.8; deaths, 14.7; and marriages, 10.4. The corresponding rates for July were: 12.9, 14.9, 12.6.

Marriages were reported for the principal counties as follows: Los Angeles, 377; San Francisco, 348; Alameda, 219; Santa Clara, 86; Sacramento, 77; San Diego, 60; and Fresno, 52.

Births, so far as registered, were as follows for freeholders' charter cities: Los Angeles, 399; San Francisco, 380; Oakland, 181; Sacramento, 59; Fresno, 46; Pasadena, 42; Berkeley, 35; San José, 31; and Alameda and San Diego, each 30.

Deaths occurred as follows in the leading cities: San Francisco, 490; Los Angeles, 329; Oakland, 154; Sacramento, 58; San Diego, 41; Berkeley, 37; San José and Stockton, each 28; and Alameda, 26.

Causes of Death.—There were 367 deaths, or 14.7 per cent of all, from tuberculosis, 313 being from tuberculosis of the lungs and 54 from tuberculosis of other organs. Diseases of the circulatory system (heart disease, etc.) caused 346 deaths, or 13.8 per cent of all. In July there were 285 deaths from diseases of the digestive system, 119 being deaths of infants under 2 years of age from diarrhea and enteritis. There were 233 deaths from diseases of the nervous system, 53 being from meningitis; and 163 from diseases of the respiratory system, 107 being from pneumonia and broncho-pneumonia.

Typhoid fever, as usual, was the most fatal epidemic disease in the month, though the per cent of all deaths due to this disease was only 1.9 for August against 2.1 for July. The deaths from epidemic diseases in August were as follows: Typhoid fever, 47; diphtheria and croup, 29; whooping-cough, 16; measles, 14; malarial fever, 9; plague, 6; scarlet fever, 5; and all others, 10.

The following table gives the number of deaths from certain principal causes for August, as well as the proportions from each cause per 1,000 total deaths for both August and July:

Cause of Death.	Deaths: August.	Proportion per 1,000.	
		August.	July.
ALL CAUSES	2,501	1,000.0	1,000.0
Typhoid fever	47	18.8	21.3
Malarial fever	9	3.6	0.4
Smallpox	----	----	0.8
Measles	14	5.6	6.7
Scarlet fever	5	2.0	2.8
Whooping-cough	16	6.4	8.7
Diphtheria and croup	29	11.6	13.4
Influenza	2	0.8	3.2
Plague	6	2.4	----
Other epidemic diseases	8	3.2	5.9
Tuberculosis of lungs	313	125.1	120.5
Tuberculosis of other organs	54	21.6	24.0
Cancer	168	67.2	53.1
Other general diseases	80	32.0	35.4
Meningitis	53	21.2	22.4
Other diseases of nervous system	180	72.0	72.0
Diseases of circulatory system	346	138.3	149.6
Pneumonia and broncho-pneumonia	107	42.8	56.3
Other diseases of respiratory system	56	22.4	16.1
Diarrhea and enteritis, under 2 years	119	47.6	35.4
Diarrhea and enteritis, 2 years and over	33	13.2	14.2
Other diseases of digestive system	133	53.2	59.8
Bright's disease and nephritis	138	55.2	57.5
Childbirth	22	8.8	8.3
Early infancy	96	38.4	36.2
Suicide	56	22.4	26.0
Other violence	247	98.7	96.5
All other causes	164	65.5	53.5

Geographic Divisions.—The table below shows the number of deaths from main classes of diseases for the several geographic divisions of the State in August:

Geographic Division.	DEATHS: AUGUST.									
	All Causes	Epidemic Diseases	Tuberculosis (All Forms)	Cancer	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System	Violence	All Other Causes
THE STATE	2,501	136	367	168	233	346	163	285	303	500
Northern California	321	21	27	12	42	38	14	29	70	68
Coast counties	139	9	15	4	29	21	6	12	16	37
Interior counties	182	12	12	8	13	17	8	17	54	31
Central California	1,374	77	183	96	129	193	107	169	161	259
San Francisco	490	28	68	45	33	83	43	57	51	82
Other bay counties	377	21	52	26	35	52	38	50	37	66
Coast counties	158	7	21	10	20	32	7	17	15	29
Interior counties	349	21	42	15	41	26	19	45	58	82
Southern California	806	38	157	60	62	115	42	87	72	173
Los Angeles	616	25	125	49	47	92	27	69	55	127
Other counties	190	13	32	11	15	23	15	18	17	46

PLAGUE.

It is greatly to be regretted that such unwarranted and seemingly malicious reports have been published regarding the plague in San Francisco. If not published with the express purpose of injuring that city they are the result of gross misinformation, which should not be expressed on such a serious question.

The fact that plague is widespread over the world, especially in the far East, that it is a rat disease, and that rats will travel wherever commerce goes, are pretty well understood. That any city, however small, that has any pretense to being a commercial port is liable to infection is admitted by every one who has studied the disease. This liability, of course, is in proportion to the amount of trade, and if the latter is at all extensive, the city will some time have the infection, but there is a great possibility that it will be unrecognized. The only safety of any city is being constantly on guard and absolute truthfulness as to the existence of the disease.

Both of these conditions pertain at present in San Francisco. The city is divided into districts, each of which is under the direction of a trained physician with inspectors, and no case escapes and every one discovered is reported and published.

At this time (September 21st), there have been 36 verified cases, with 22 deaths since August 12th—certainly not enough to constitute an epidemic, nor to cause undue anxiety when it is known that everything possible is being done to eradicate the disease. Rats are being trapped and poisoned and all infected localities disinfected. No ship is allowed to leave the city without fumigation for the purpose of killing vermin, and it is highly improbable that the disease will leave that port by that means. The river steamers are also being fumigated to protect the inland towns.

The United States Public Health and Marine Hospital Service, and the State and City Boards of Health are working in absolute harmony, with Dr. Blue of the United States Service in command.

The Bulletin will continue to tell the exact truth about the situation, believing that the people have a right to know it, and that it is best that they should.

They should remember, however, that they have a duty to perform in the eradication of the disease. It is spread almost entirely by rats, the watchfulness of the health departments preventing infected persons exposing others to any great extent. It is no small task to kill the rats of a city, and can only be done by the united effort of every one. If each householder will see that they are killed on his premises there will soon be none and the disease will stop. The expense is light to each one, but for a city to do this work will cost a great amount and the results will not be equal to those attained if every one takes a hand. To be successful in either trapping or poisoning, food must be kept from them. In other words, all garbage and swill must be kept in covered receptacles where rats can not get at it. This should be done in any case, but when it is desired to catch rats it is imperative.

The following is from the United States Public Health Reports:

THE CAUSATION AND PREVENTION OF PLAGUE.

The following extracts are from a series of lectures on plague delivered June last before the Royal College of Physicians of London by Dr. W. J. R. Simpson, professor of hygiene at King's College, London, and government commissioner to inquire into the causes and continuance of plague in Hongkong, 1902:

Modes of Dissemination of Plague and Channels of Infection.—It is now accepted that the importation of plague into a healthy locality can be effected by an infected human being, or an infected rat, or infected clothes. Observations have been so numerous as regards these agencies as to remove all doubt on this point. Dr. E. E. Klein has further shown by some important experiments that infected grain may also be an agent in the importation of the disease. By feeding rats and guinea pigs with grain which had been contaminated with old cultures of plague, and which was then dried, he was able to cause plague in those animals, so that grain which has been infected with infective material from plague rats or human beings may, on importation into a healthy seaport, give plague to healthy rats on shore which eat the contaminated portions of the grain. The association of corn ships with plague is a very old one. In recent years the association has been ascribed almost wholly to plague rats on board ship which have left the ship and infected healthy rats on shore, but now infected grain must be added as a likely agent.

Once imported, the dissemination of the disease is effected by similar agents as those bringing about importation. Rats, clothes, human agency, and food play their respective parts. It is now almost universally admitted that, except in pneumonic cases, rats are the principal agents in the dissemination of the disease, though personal contact, as in typhoid fever, also plays its part. They bring the infection into houses connected with their subterranean passages. In Hongkong one could trace many of the subterranean passages with their infected rats and their connection with the distribution of the disease in the houses. A systematic bacteriological examination of rats trapped and found dead proved that plague in the rats of the locality preceded plague in man. So constantly did this occur that as soon as plague-infected rats were discovered measures were introduced, as in Cape Town, but on a more extended and systematic basis, of treating the house or locality as plague infected. In other words, a policy of forestalling plague was adopted. The precedence of rat plague in relation to plague epidemics was observed in Bombay, the Punjab, Calcutta, South Africa, Australia, and southern China. The value of the Hongkong observations lay in the direct evidence obtained by scientific and precise methods not only of the direct relationship which the precedence of rat plague bore to human plague, but also of the important rôle which the rat plays in the spread of the disease from house to house and in groups of houses. Similar observations were made by Dr. J. Ashburton Thompson, in Sydney, but under different conditions. The Sydney outbreaks are comparatively mild, the mortality being under 40 per cent, and consists mainly of bubonic cases with but few septicæmic cases. Probably the type in Sydney was the same as that met with in Cape Town, where one of the marked features was absence of cerebral symptoms and intestinal disorders, differing in this respect from the type met with in Poona in 1897, but which in 1907 seemed to me to have changed, presenting fewer nervous symptoms. The Hongkong outbreaks are exceptionally virulent, the mortality being over 80 and 90 per cent and with a large percentage of septicæmic cases.

The problem of the dissemination of the disease by rats is not solved by simply proving that rats are infected with plague in a house or locality before human beings, or by the fact that if measures are taken to dispose of the infected rats human plague will not occur, and, vice versa, if no measures are taken plague will attack some of the inmates of the house. The question naturally arises, How is the infection of the rat transferred to man? There are two views and the upholders of each have a tendency to claim that theirs is the only way. The more that is learned of plague the more it is evident that there is no only way.

The Flea Theory.—Dr. Ashburton Thompson had exceptional opportunities of studying the small outbreaks in Sydney and on that study he came to the conclusion that Simond's theory that the flea on the rat, leaving the rat dead from plague and then biting man, transfers plague from the rat to man, explained the phenomena connected with plague. That theory, of which Dr. Ashburton Thompson is the champion, has recently received very valuable support in its favor from the very important experiments made by the Indian plague commission and which are the outcome of certain researches by Capt. W. G. Liston, I. M. S., to whom much credit is due for his excellent work in this direction. These experiments established first the accuracy of Simond's and Gauthier's and Raybaud's experiments as to the power of infected fleas from plague rats causing plague in healthy rats. * * * On the other hand, taking the most liberal interpretation of the flea theory based on the experiments mentioned, it is doubtful whether the flea theory will account for more than a certain percentage of the fatal bubonic cases which may vary in different circumstances in different localities. * * *

The Food Theory.—More post-mortem examinations are made on plague cases in Hongkong than in any other part of the world, and it is on the observations there both on man and animals that the theory has been formulated that the ingestion of food contaminated with the plague virus is the cause of septicæmic cases of plague. * * *

Measures to Protect Healthy Districts.—A careful inspection of crates filled with goods from infected localities should be arranged for in order that any dead or sick rats may be immediately discovered and disposed of in a safe manner and the contaminated portion of the goods disinfected; for the same reason an inspection of fodder and loads of grain from infected localities is necessary. The warehouses attached to railways and docks require to be especially watched; also granaries, stables, slaughterhouses, and markets, where rats from infected localities are likely to be imported and spread infection among indigenous rats or where contaminated goods infect healthy rats.

Measures in Infected Localities.—With regard to infected areas the only measures on a large scale available are inoculation, evacuation, and disinfection of infected houses and destruction of rats. * * * Evacuation of an infected locality and inoculation promptly carried out will stop any epidemic. In Cape Town plague was becoming serious among the Kaffirs. It was decided to remove them from their dwellings, where they were crowded together under most insanitary conditions, as bad as, if not worse than, any in India. In the course of a week from 7,000 to 8,000 were removed to a small village prepared for them and all were innoculated. The epidemic ceased among them, and although after two or three days' rest, in order that they should recover from the malaise caused by the inoculation, they came in regularly to Cape Town and often worked in infected portions of the town, they remained free from the disease.

In an infected area the measures to be adopted are controlled to some extent by circumstances. In some localities all the measures mentioned can be brought to bear, and of course these are the best conditions for success; but if plague is in a village where there are no means of disinfecting the huts and destroying the rats during the process of disinfection, then evacuation and inoculation are the only measures that can be practiced, and if inoculation is carried out the evacuation need only be as long as is necessary to allow of time for the inoculations.

Doctor Simpson recommends the exposure of grain to the sun, boiling the infected clothing, and general destruction of rats; and he insists particularly on fumigation by sulphur for the destruction not only of plague germs, but of all rats, fleas, bugs, and other insects in houses. On this subject he says:

"Everything is disinfected *in situ*; the only articles that require to be removed are such foodstuffs as flour, fresh fruits, fish, and meat. Rice and grain need not be removed and would be disinfected along with the other contents of the house. * * * In the case of a plague patient being in the house and objections being raised to removal to hospital the patient can be made comfortable in a tent during the fumigation and be removed back to the house after twenty-four hours, for with the rats and insects destroyed there would be little danger of the spread of the disease. After the patient had recovered or died the house could be again disinfected."

In conclusion, Doctor Simpson insists on the necessity of the formation of a special and trained plague service for the prevention and mitigation of plague in India.

CALIFORNIA PUBLIC HEALTH ASSOCIATION.

The Fall meeting of the California Public Health Association will be held at Woodland, October 25th.

A program of unusual interest is being gotten out by the officers, and it is greatly to be desired that all health officers be present and take part. All physicians and others interested in public health and sanitation are cordially invited to be present. No dues are charged or plate passed.

The pure food question and the enactment of the law which takes effect on January 1, 1908, will be discussed by Professor Jaffa, Director of the Pure Food Laboratory, and a representative of the Pure Food Commission of the Southern California Medical Society will be present and take part in the discussion. The close proximity of the time when this law goes into effect and its great importance make it an extremely interesting subject.

Dr. H. J. B. Wright, of San José, will have a paper dealing with the experiences of a public health officer. His great experience insures an interesting and profitable half hour.

Tuberculosis will be the theme of Dr. C. C. Browning's lecture, which will be illustrated with the stereopticon. Perhaps no one in the

State is better able to deal in an intelligent manner with this subject than is Dr. Browning, and the fact that California stands at the head of the column of States for the number of deaths from this preventable disease should bring every one of us to the meeting.

Dr. W. F. Snow, head of the Department of Hygiene of Stanford University, has been invited to give an illustrated lecture on some subject relating to public sanitation, and will, no doubt, respond. Other subjects may be introduced, but these will be enough to show that the committee is preparing a feast. Kindly accept this as a personal invitation to be there.

Dr. F. K. Ainsworth, Chief Surgeon of the Southern Pacific Railroad Company, and a member of the State Board of Health, has kindly arranged for half-fare rates on the Southern Pacific Railroad for all city and county health officers and members of boards of health who wish to attend the meeting. Any of these wishing to attend the meeting will notify N. K. Foster, Secretary of the Association, at Sacramento, of their intention to attend, giving their address. These will be forwarded to Dr. Ainsworth, who will send an order for the reduced rates direct to the party. The time limit will be three days prior and three days after the meeting.

THE NEW PURE FOOD AND DRUG LAW.

While it is true that the State Food and Drug Laboratory will not be legally established until January 1, 1908, public interest in the work is manifested by the large number of letters received and the samples submitted for examination and analysis. The most notable recognition of the Laboratory and its importance was shown by the Honorable Secretary of Agriculture, James Wilson, upon his recent visit to California. The Secretary personally requested the coöperation of the Laboratory with the Bureau of Chemistry, United States Department of Agriculture, in connection with its investigation on sulphuring of dried fruits, which is still in progress.

It would appear that this is an opportune time to draw public attention to the McCartney Pure Food and Drug Law passed at the last session of the Legislature and to go into effect on January 1st, next. This thought has been emphasized by some statements appearing in one of the San Francisco journals to the effect that California should take part in the great pure food and drug movement which is agitating the country from one end to the other.

Full and complete copies of the new law may be had upon application either to Dr. N. K. Foster, Secretary of the State Board of Health, Sacramento, or to Prof. M. E. Jaffa, Berkeley.

It might be stated at the outset that every Californian should congratulate himself on the passage of such a law as we now have, and there are many reasons for this.

The State Board of Health and others have been working for years for the enactment of laws which would protect both the consumer and producer. Not only has this been accomplished by the McCartney Act, but by its provisions this State will work in perfect harmony with the Federal authorities in their administration of the National Pure Food and Drug Law of June 30, 1906. Such coöperation is absolutely necessary and highly essential for the success of the pure food and drug movement, and bringing about the best conditions for all concerned. It must not be forgotten that by such action we shall have the maximum results with the minimum expenditure for the enforcement of the law, which is for preventing the manufacture, sale or transportation of adulterated, mislabeled or misbranded foods, liquors or drugs, and regulating the traffic therein; providing penalties, establishing a laboratory for foods, liquors and drugs, and making an appropriation therefor.

In accordance with the provisions of the new law the examination and analysis of foods and drugs will be made under the supervision of the State Board of Health, which has established its laboratory at the University of California. All can be assured that as far as the analysis and examination of foods and drugs are concerned a broad, liberal and just policy will be pursued with reference to both the producer and consumer.

The law will insure to the consumer articles of food in accordance with the labels thereon; in other words, all foods or food materials will have to be honestly labeled and free from adulterants or preservatives of an injurious kind.

We are very fortunate in that we do not have to make any standard or render any decisions regarding labels, brands, etc., as shown by Section 3 of the Act, which reads: ''The standard of purity of foods and liquors shall be that proclaimed by the Secretary of Agriculture of the United States Department of Agriculture.'' Not only is this with reference to foods, but it also applies to our medicines and drugs. The exact ingredients of any compounded medicine must be stated on the label.

Naturally this will result in a smaller consumption of many of the patent medicines and other nostrums. For instance, when mothers know that certain soothing syrups contain opium, they will be very loth to administer the same to crying babies. Again, there are a large number of patent medicines which in the past have contained a high percentage of alcohol, fully as much, in some cases, as whisky. The Federal law has already accomplished much in stopping such pernicious practices.

The Act is very broad in its scope, as is provided by Section 2, which reads: ''The term food, as used in this Act, shall include all articles used for food, drink, liquor, confectionery or condiments by *man* or *other animals*, whether simple, mixed or compounded.''

It is thus seen that the food inspection is not confined to the food of man, and it may be stated that the State Laboratory will devote all the attention possible to the end that the cattle and poultry men can feel assured of what they purchase. This policy will be carried out in regard to simple and mixed foods.

The two main lines of work to be taken up by the State Laboratory with reference to food for man and other animals will be, first, the examination for preservatives and coloring matter prohibited by law, and second, the examination of foods for the purpose of ascertaining if they are honestly labeled.

It has been said that the administration of the new law would be broad and liberal, and it may also be stated that the State Board of Health does not intend to confine its labors to merely police work. The investigational and educational side of the question will receive a fair share of attention. That there is a wide field for such efforts is evidenced by many existing conditions, and a few illustrations will fully bear out this point.

Some years ago the trade demanded a dark colored wine,—why? Not because it tasted any better, but only because it *looked* better. In many cases the natural color of the grapes was not deep enough. The winemen, therefore, in order to satisfy the consumer, added a coloring matter. The law stepped in and prohibited the use of the artificial materials for coloring wines. What is the result? Why, to-day the consumer is perfectly satisfied with a lighter colored wine, he having been educated to the use of such.

Again, the fruitmen, especially those who dry fruits, will have to educate the public to consume fruit not sulphured to the extent to which they have been accustomed. A slight sulphuring of fruit will not materially affect it, but the amount of sulphur often used to produce the golden-colored apricot or peach, or the absolutely white apple from immature fruit is detrimental to the health of the consumer. The latter wants golden yellow fruit and is willing to pay the highest price for it. When the public is educated to undertand that the brown fruit has a finer flavor and is more wholesome the producer and packer will be encouraged to use their best efforts to put dried fruit upon the market containing the least possible amount of sulphur. Similarly as regards dried or desiccated vegetables.

The poultry-raiser also suffers from the whim and fancies of the consumer. This is well illustrated by the fact that the ruling market price for brown-shelled eggs is lower than that for the white-shelled. There is absolutely no reason for such discrimination. A complete and careful investigation, including both chemical and physical analyses, failed to indicate any difference between the nutritive value of the brown- and the white-shelled eggs.

When the public on the Pacific Coast shall be educated to a thorough appreciation of these facts, then will the raisers of poultry laying brown-shelled eggs receive the same encouragement accorded the raisers of poultry laying white-shelled eggs.

In conclusion, it might be well to reiterate that the main object of the law is not to harass or hamper any well-intentioned producer or manufacturer. It is designed to protect the honest manufacturer from the competition of the dishonest one, to insure to the consumer pure, wholesome foods, and to educate and enlighten all sides on the question of pure foods and drugs.

M. E. Jaffa.